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INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

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S E C R E T

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COUNTRY East Germany

REPORT

SUBJECT Heinrich Hertz Institute: 1956 Annual
Short Report on Scanning of Ionospheric
Layers

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"Scanning of Ionosphere Layers by means of a Full-Angle Transmitter to
Determine Limiting Frequencies"

After completion of the antenna unit in May 1956, the full-angle transmitter and receiver unit of HHI was set up at the Juliusruh station on Ruegen Island and a test run was made. Beginning on 17 July 1956, ionogram recordings were made every half hour, 24 hours a day. The results met the requirements for a good ionosphere station and were in agreement with the results of the ionosphere station. However, the coastal radio station at Ruegen complained that impulse transmissions of the full-angle transmitter disturbed reception on the international maritime communication and SOS frequency for cutters (2182). In order to insure that the transmitting license for the full-angle transmitter would not be revoked, experimental transmissions were temporarily halted on 31 July. After some further transmissions and discussions with the Ruegen radio station, it was determined that the disturbances were primarily due to the high input sensitivity (Eingangsempfindlichkeit) of the receiver and the great directivity of receiver antennas in the direction of the Juliusruh station. In order to obtain a better isolation of the installations, the one transmitter antenna used is to be replaced by three antennas with a narrower frequency range in 1957. It is further planned to reduce the time used for scanning the entire frequency band (10 minutes at present) so that a shorter jamming time of the disturbed frequencies can be attained.

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